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[For the American Bee Journal.]

## A Leaf from History.

In May, 1869, my father, then in the enjoyment of a temporary release from ill health, commenced the preparation of the following article. The pressure of affairs in the apiary delayed its completion, and returning illness left it in its present condition. Being led to believe that the facts therein contained should be given to the public at the earliest possible moment, I have taken his notes and copied them in precisely their present order. I will add that the almost continual bodily prostration of my father by disease, has prevented any application on his part to the Patent Office for the independent patent referred to in the extract from our circular, and to which we believe him justly entitled. I much regret that the article cannot receive the finishing touches he designed for it; but, as it is, it is an interesting and valuable piece of reading to all using the triangular or bevel-edge guide in his movable frames.

J. T. LANGSTROTH.

November 8, 1869.

### HISTORY OF TRIANGULAR OR SHARP EDGE COMB GUIDES.

It may be interesting to many readers of the BEE JOURNAL, to know the leading facts in the invention of the triangular or sharp edge so generally used for securing straight combs.

In my movable comb frames, (Patent applied for in December, 1851, and granted October 5, 1852), I used small pieces of worker comb for guides. After many unsuccessful attempts to secure straight combs without such guides, I devised in February, 1852, the triangular edge, (see note A). These guides were extensively used and sold by me in hives made in Greenfield, Massachusetts, in the spring of that year. Finding them to answer, substantially, the ends intended, I applied for a Patent for the device before it had been in public use two years. The Office declared an interference between my claim and those subsequently made by Mr. Geo. H. Clark, of East Washington, New Hampshire. Testimony was taken by both parties, and before the matter was decided by the Commissioner, a new application for a Patent on the same device was made by —— May, of Illinois; who claimed a secret use of the same two or more years before Clark, and the Commissioner declared an interference between the three parties and required testimony to be taken. Before, however, the time of hearing came, he decided that substantially the same device was shown in a note to the English edition of Huber, and that neither of the parties was entitled to a Patent. Subsequently Mr. Clark, after repeated rejections of his application, by persistent efforts, procured a Patent for his device.

The testimony taken in Mr. Clark's case shows that he was led to the use of the sharp edge by seeing bees build a small piece of comb on the edge of a square stick accidentally put into a hive in such a position as to present a sharp edge. From the testimony of his brother and sister, his only witnesses, it appears he kept the matter a profound secret; and they testify to his making only two hives with sharp edges on the bars—and to only one in which bees were put. Now, as bees sometimes pay no attention to the guides, but build their combs at right-angles to them, the fact of their once building them on the line of the guide, though a very strong presumptive evidence that they will usually do so, seems hardly to be that absolute proof which is necessary to constitute an "invention." It may be, however, that Mr. Clark used these guides in more than one hive, and that he was prevented from proving this by the rule then existing, which did not allow him to testify in his case.

Since the matter was before the Patent Office, I have discovered that the celebrated English surgeon, Hunter, in an article published in the ——, very clearly shows that he was well acquainted with the sharp edge device for making the combs run in any desired direction. It could therefore only be patented on some new and useful combination.

In my original application in 1854, supposing

myself to be the first inventor, I claimed the device absolutely for bars, frames, and all kinds of hives and surplus honey receptacles, the guides being either large or small bevel, (see note B). Had I then known of Hunter's device, I should have confined my claim to bars and frames. Mr. Clark, in his original application, made some six months after mine, did not claim the sharp edges absolutely, but the beveled bars in combination with a saw kerf running parallel with the bars, to which the bees could cling when hived, and which he thought rendered them more disposed to follow his guides.

That the Patent Office did me a great wrong in declaring an interference between my claim and Mr. Clark's, will be admitted by all familiar with Patent matters. They ought to have granted my claims, and also those of Mr. Clark, whose Patents then would have been subordinate to mine, and could not have been used without license from me. It would then have become necessary for me, after discovering what Hunter had done, to have had a re-issue of my Patent, limiting my claim to the use of the triangular edge on bars or movable frames. If Mr. Clark had felt that his invention was prior to mine and covered the same thing, he could have applied for a re-issue of his Patent; and if he could have proved priority, the Office would have been obliged to grant him a re-issue covering the claim of my Patent; and it would have remained for the courts to decide, when asked, whose Patent was valid.

The state of my health has delayed me in making such statements as the case seems to demand, so as to show why, after Clark has obtained a Patent, which his friends claim covers the use of the sharp edge in frames, (see note C.) I still persist in using such an edge in my hives, without procuring a license under his Patent. From the article of Dr. Hunter it is very evident that neither Clark nor myself were the *first inventors* of this sharp edge comb guide, although we ot the time supposed we were. All that we can claim is the combination of the edge with bars or movable frames. Mr. Clark's testimony is that he invented his device some years before I claim to have invented mine; but that he kept the matter secret from all except his near relations. He made his invention, as he admitted to myself and others, accidentally, from obserbing the bees building a small piece of comb in the line of such an edge. In my Journal for February 12, 1853, is the following record:—"Let triangular pieces be fastened to frames, to serve instead of guide combs. These may be an inch on the top or smaller, according as experience shall determine. * * * I feel a strong persuasion that these will dispense with all guide combs, and yet not interfere with fastening on combs." Those who learn that I had been experimenting for a long time to get straight combs without using pieces of worker combs as guides, can easily conceive with what impatience I waited for bees to swarm, and with what delight I found my triangular guides translated out of the airy regions of theory and conjecture into the solid domain of demonstrated facts.

I give another extract from my Journal, June 4, 1853:—"Examined frames in two new swarms, in each comb quite regular without any guides—in one, wax eaten off the edge—think that the new frames" (that is, the frames with triangular edge) "will answer, without any wax or comb as guides." These observations were made in Greenfield, Massachusetts, and that same season a large number of hives were sold, the frames having the triangular guides. Having used this device publicly nearly two years, and demonstrated its success, I applied for a Patent, as above narrated.

Now, neither Mr. Clark nor any of his friends will say that it was possible for me to have borrowed from his device, used secretly and never communicated to any one outside of his family, until more than two years after I had used and sold the same; nor will I even intimate that his application was an after thought, when he saw the success and importance of the invention, for I have no reason to doubt that he was truthful in asserting his prior use of the same. But I do assert most undoubtedly that his Patent on this guide has no validity, and will give the reasons which led to the publication, in the circular of L. L. Langstroth & Son for 1867, of the following:

"As parties are frequently asking information about the right of G. H. Clark to the absolute control of the triangular comb guide, we would caution the public against paying any fees for the use of this device in our frames, as we believe that L. L. Langstroth is clearly entitled to, and will soon obtain, an *independent* Patent on its use in movable bars and comb frames. We are so confident that the Clark Patent cannot be sustained, so as to control the comb guides used in the Langstroth frames, that we hereby expressly guarantee all parties purchasing of us under our Patent, against any costs or damages that may be awarded by the courts, if suits are brought against them for using this guide."

It is important to state that Mr. Clark was residing in East Washington, New Hampshire, not over one hundred miles from Greenfield, Massachusetts, my place of residence, where my frames with guides had been *made, used, and sold, more than two years before he applied for his Patent.* Repeated decisions of the Supreme Court of the United States show that by his delay he had forfeited all right to obtain a Patent; and that, had the Office known the facts, they would never have issued it. I do not question that he was entirely ignorant of this fatal defect, and that had he known it, he would have made no appication. Justice to myself and to the bee-keeping public, who are constantly asked by parties who have purchased Clark's Patent, to pay for the guide in my hive, and on other hives, compels me to make these facts known.

I shall close this article by a few extracts from the decisions of the United States Courts, which make it perfectly plain that Clark's Patent has no validity. These extracts are all taken from Law's well known "*Digest of American Cases relating to Patents for Inventions,*" &c., published by Baker, Voorhees, & Co., New York, 1866.

"No matter by what means an Invention may be communicated to the public before a Patent is obtained, any acquiescence to the public use, by the inventor, will be an abandonment of his right. If the right were asserted by him who fraudulently obtained it, perhaps no lapse of time could give it validity. But the public stand in an entirely different relation to the inventor." Shaw *vs.* Cooper, 7 Peters, 320, McClean J., Sup. Ct., 1833.

"A strict construction of the act, as regards the public use of an invention, before it is patented, is not only required by its letter and spirit, but also by sound policy. The doctrine of presumed acquiescence, where the public use is known, or might be known, to the inventor, is the only safe rule which can be adopted on this subject," *Ibid.*, 321, 322.

"The question of abandonment does not turn upon the intention of the inventor. Whatever may be his intention, if he suffers his invention to go into public use, through any means whatever, without an immediate assertion of his right, he is not entitled to a Patent; nor will a Patent obtained under such circumstances protect his right." *Ibid.*, B., 23.

"S. made an invention in 1854, but did not make an application for a Patent until September, 1858. L. invented the same in January, 1858, and made application for a Patent therefor in August, 1858, and had manufactured the articles and put them in market. An interference was declared between such applicants. *Held*, that S. had forfeited his right to a Patent." Saverey *vs.* Louth, MS., (App. Cas.) Morsell J., D. C., 1859.

"There can be no doubt that where a party has made an invention and buried the secret in his own bosom, he may, after a lapse of years, come forward, and upon making a secret known by an application for a patent, obtain a monopoly." Bey *vs.* Thistle, MS., (App. Cas.) Merricks J., D. C., 1860.

"But if in the meantime another has made the same invention, and has obtained a Patent, and the public has thereby become possessed of the discovery, when the first inventor applies he will be met with the inquiry whether he has used due dilligence in communicating his discovery. In such case the first inventor forfeits his claim." *Ibid.*

These and other decisions to the same effect, which can be given if necessary, clearly show that Mr. Clarke's Patent has no validity whatever—in law—and that he has not the slightest claim in equity to step in and attempt to prohibit an original inventor, who had used and sold his invention more than two years before Clark applied for a Patent, from using his own independent invention.

L. L. LANGSTROTH.

OXFORD, OHIO.

## NOTES.

A. I have since 1851 kept a Journal in which are minutely recorded my experiments, observations, thoughts, and devices, pertaining to bee-matters, by which I can show the date of my inventions and discoveries.

B. Mr. Clark's guide is a large triangle. I find that such a triangle gives a much less firm support for the combs than one only ¼ of an inch. Mr. Clark used hollow, tubular winter passages, at right-angles to his bars, so that the combs were not movable at will.

C. I have never been willing to admit that Clark's claim to these guides on bars covers my use of them in movable frames. His original application very clearly shows that he intended to claim them only in his saw kerf combination.

[For the American Bee Journal.]

## Novice.

DEAR BEE JOURNAL: We take the liberty, in consequence of our present location at the exact time, 9 o'clock P. M., Nov. 8, 1869, of summoning the Editor and all the readers of the BEE JOURNAL, *en masse*, to examine our new Bee House, just completed, in which we are very comfortably ensconced, now writing. In fact, if the bees find it *half* as comfortable, they certainly ought not to complain.

It is a cold, snowy, freezing night outside; yet we are in our shirt sleeves, and with the aid of only a very small fire in a "wee bit" of a stove, we have the most even summer temperature; not confined air like that of so many rooms. Neither have we any chilling sensation from the walls and corners, so suggestive of coughs and colds at this time of the year, but a quiet stream of fresh though not cold air from our ventilating arrangement to be presently described. In fact our "better half" is rather more than "half" disposed to dispute possession of it with the bees and appropriate it for herself and the children, through the coming winter, as being far more pleasant and comfortable than any room in our dwelling house. The children already find it an admirable play-room, as the walls and even floor are so clean and warm, they can lie down at pleasure, with no fear of the before-mentioned colds, and the ventilator in the floor furnishes a rare place for sport with windmills and experiments in pneumatics.

Now, if you are all listening, we will tell you how we built it, and what it cost.

To commence at the bottom, we had a stone foundation laid, 10 by 14 feet, with two rows of brick on top, with holes in the opposite sides of the wall, by omitting two bricks, to admit air under the house for ventilation. Sills 6 by 10 inches, studding 1½ by 10 inches, eight feet long, set one foot apart, plates 2 by 6 inches, rafters 2 by 3 inches, sleepers 1½ by 10 inches; these were raised on blocks, sills and all, high enough for a man to go under to nail boards on the under side, to hold the sawdust under the floor, and then let carefully down on the walls.

Best quality of pine siding for outside, and

inside covered completely with inch pine lumber planed and grooved, so as to have a tight wall to hold the ten inches of sawdust, without its sifting through in the way. One window in one end, and a door in the other or rather double doors, and tight shutters for the window; and if necessary, we are going to have a straw cushion to fill in both. As we shall want a stove in it in the spring, after the bees are removed, for "artificial incubation," we had the top ventilator made of galvanized iron, and in dimensions 7 inches in diameter, so that it can be used as a stovepipe when desired. It just comes below the ceiling inside, and at the top is made so as to exclude light, snow, and rain. The lower ventilator is simply a square box, 7 inches across, through the floor, covered with wire cloth to exclude mice, and a nice piece to just fill the top in summer time, when it is not needed.

We have had one rather weak swarm in already, to test our house. We noticed them one quite cold night making a very loud humming, such as weak swarms make when very cold; and in two hours after carrying them in, they were so still that you could *not hear a sound*, unless the hive was struck. Is not that the proper test for the right amount of ventilation—a temperature that the bees should be *perfectly still?* We think we can do it every time, with any one of our hives singly; but it may be more difficult with them all together.

We have had some very cold, freezing weather in October here, and many of our hives brought out more dead bees after it than we really like to see. They had probably strayed out of the cluster, and there were no passages through the combs. The weather has been cold enough for the past three or four weeks, so that we think we should have found no difficulty in keeping our bees cool enough in here; but we dislike to house them before about the middle of this month (November.)

Well, we found in front of one of our heaviest hives (a swarm made artificially entirely, in September), quite a number of dead bees, perhaps half a teacupful, and, worst of all, among them one of our finest, largest, and yellowest queens. The bees were making an unusual fuss, which was in fact what first attracted our attention to them, so that they had evidently just discovered their loss. On opening the hive, we could find no trace of brood in any stage. Did the queen get frozen, like the bees, or was it some disease? And is it common for young queens to die so? She had raised fine workers, and her hive was quite populous. Thus we had to take the queen from the light stock we were experimenting with, which we regret, for two reasons. First, our number is now only forty-six, and we are afraid friend Argo will surely beat us. Second, our stocks are all strong now, and we always want one to experiment with and build up. Some of our best swarms have been made in that way. Could not a small nucleus hive be wintered in a house like this, and so save your reserve queens? Has any one ever tried it?

Mr. Editor, do you know that your compositor and proof reader between them managed to make a great part of our last article all nonsense? Perhaps it was so already, but they made it worse. They made me say "warm *rain*," whereas I wrote "warm *sun*."

We will try again to give our ideas on wintering, so far as experiments and what we have been able to gather from the whole series of volumes of the BEE JOURNAL, and from those having tested the matter largely.

There are two distinct ways of wintering, and they cannot well be combined in any way that we have heard of, if we understand the matter. They are—

Outdoors, on summer stands, and

Indoors, in frost and sun-proof repository.

By the first plan we would give them all the sun possible, to enable them to prepare in succession for each cold snap. And we can see no plan so good as to give them a hive that will warm through quickly. We cannot understand how a hive standing alone, out doors, can be covered or packed to keep out the frost entirely, as they are in a special repository, with the benefit of the warmth from a number in a room together; and if it is attempted at all, the benefit from the sun is necessarily cut off more or less. That bees do winter in that manner is no proof, as they usually winter well where nothing is done, if they have ventilation sufficient.

The object to be gained by having a special repository is, first and foremost, a great saving of honey; and second, a great saving of bees in each hive. When they are wintered out of doors, every cold snap kills off a few; and from the frequency of this, the aggregate in the end amounts to nearly three-fourths of their whole number. Nay, we have known them to build up when not more than a pint of Italians were left with the queen, and it took nearly the whole season to do it. It is easy to see that one full stock of bees in the spring is of far more utility, than many of such as are nearly played out.

How many times has it been discovered or recommended to have the hive enclosed in a large box, or made double with a dead-air space all round? And the reason of failure of such plan has been many times given—that all benefit usually derived from the sun is cut off, which more than counterbalances the protection obtained against frost. Why do not all methods of out-door packing come under the same head—even the one given by Mr. Langstroth, to say nothing of preparing the hives as he advises?

We may be mistaken, but we cannot think that any protection of that kind would be sufficient to allow a bee to go around a comb, or go to any part of the hive for honey, when the mercury is below zero, as they could if housed in a building like ours.

Many have said to us that five inches of sawdust would be plenty; but in a building in which we expect no aid at all from the sun—but all from their own animal heat collectively—we shall find full as much trouble in keeping the effect of the *sun* out (as we tried to tell last month) as in guarding against frost. And even though our room is as dark as midnight, we do not expect our bees to be as quiet as they should be, unless the temperature is kept not higher than 40° or 45°; and when we cannot do that we shall expect to set them out.

Our house has cost us as follows :—

| | |
|---|---|
| Stones for the wall, delivered | $4 50 |
| Laying same | 4 50 |
| Bricks $2 80, mortar $2 | 4 80 |
| Lumber for frame | 29 98 |
| Shingles | 8 00 |
| Roof boards | 3 60 |
| Siding and ceiling, best quality, inside and outside | 40 40 |
| Carpenter 22 days, at $2 25 | 49 50 |
| 7 loads sawdust, $2 | 14 00 |
| Ventilator, galvanized iron | 6 50 |
| Painting | 18 00 |
| Eave spouting | 5 00 |
| Nails, door fastening, &c | 7 35 |
| | $196 13 |

We may add one week's personal supervision, $24,00, were we not afraid that it would flavor of Horace Greeley's turnips, that cost him $1 12 each; though he thinks that by more careful management, next year, he can raise them for $1 each.

If you find this too tedious, Mr. Editor, or that you have matter of more value on hand, do not let anything of importance be crowded out to make room for NOVICE.

[For the American Bee Journal.]

## Honey Emptying Machine.

On page 87 of the AMERICAN BEE JOURNAL, Mr. Thomas C. Hill criticises somebody's description of a honey emptying machine in the February No., and says that when he attempted to make one, he found it would be necessary to bore an inch hole through a three quarter inch stick, and divers other things just as impracticable. He then goes on to give a bill of stock to make one of his own invention, but does not say a word about how to put it together—whether we must bore an inch hole through a three quarter inch stick, or a half inch hole through a quarter inch stick. I think if a man were to undertake to build one from the bill of stock given by Mr. Hill, without any directions as to how to put it together, he would find it an *up-Hill* business.

Come, friend Hill, tell us how to put it together. I am anxious to have a machine, as many of my bees have too much honey to winter well, and I have not empty combs enough to exchange with them. I therefore want a machine to empty some of them. But, for my life I cannot see how to put your machine together. I am somewhat of a mechanic, and have put together many sorts of machinery, but always had some drawing or directions to go by. Consider, it is not an easy task to take twenty-five or thirty pieces of different dimensions and materials, and put them up so as to make a thing like something never seen before. How is it to be turned? You said something about any gearing, or crank, or cord, to turn it with; or is your machine so constructed as to extract the honey without any motion?

H. NESBIT.

CYNTHIANA, KY., Nov. 1869.

[For the American Bee Journal.]

## Parthenogenesis in the Honey Bee.

When Herr Dzierzou, the clever German Bee Master and Naturalist, first called attention to this extraordinary doctrine of true parthenogenesis, or production by the queen, without having any intercourse with the male or drone Bee, he raised such a swarm of opponents, in nearly all the Naturalists in Europe, who scouted the very idea of such a production, and raised such a host of objections against such a theory being true, that Dzierzon himself began to doubt the correctness of what he had seen with his own eyes. A number of them set to work to prove the fallacy of such a statement, but every experiment that was properly conducted only confirmed the correctness of Dzierzon's theory, and Professor Theodor Von Siebold (one of the most distinguished German Naturalistss and Physiologists) fully confirmed this doctrine, after a laborious dissecting and microscopical investigation, he discovered a set of voluntary muscles for imparting some of the male element which is stored up in the spermatheca, to every worker egg, during its passage through the common oviduct. He also discovered lively spermatozoids in the semen of the drones, as well as in the contents of an impregnated spermatheca, and detected the same spermatozoids in worker eggs, whilst they were entirely wanting in those eggs that would produce drones.

This long and acrimonious dispute was at last conclusively settled; all honor be to Herr Dzierzon for his laborious observations, as it has explained many of the mysteries of the hive, in which the great King of Bee-Masters, the illustrious Huber, after discussing the effects of retarded impregnation, exclaimed, "It is an abyss wherein I am lost." All other great Bee-masters have been equally lost in this abyss, until Dzierzon discovered the doctrine of true parthenogenesis, and it is now a confirmed fact that the queen has the power at will to lay drone or unfructified eggs, or fertilized worker eggs.

It has been stated by a number of writers on bees, that the queen has to lay worker eggs a certain length of time, and then a quantity of drone eggs. But I have seen the queen in my glass observatory hives lay worker eggs, then a few drone eggs, and immediately worker eggs again, all in a few minutes; and I saw these worker and drone eggs hatched out into perfect bees, which conclusively proves that the queen has the power to fructify the eggs or not, at will.

I always like to confirm or not, all these theories about bees, by my own experiments. So, having received some beautiful Ligurian queens direct from Switzerland, on the 22d day of September, I thought a few days after that it would be a very conclusive confirmation of this wonderful doctrine if I could raise a queen so very late in the season, as every drone had disappeared several weeks before. So, on the 7th day of October I examined the combs in one of the stocks, to which I had joined one of the imported Ligurian queens, on the 23d day of September, and found a very large quantity of eggs laid in three combs. I removed one of the

combs, and put it into another stock, from which I removed their queen.

October 18, examined the combs and found five royal cells sealed (11th day.)

October 22, examined the combs about three o'clock, and found one of the queens just ready to leave its cradle (15th day.)

October 23, found four young queens thrown out on the alighting board.

October 26, examined the combs and saw the splendid virgin Ligurian queen.

November 14, again examined all the combs and could not find a single egg laid. I saw the splendid virgin Ligurian queen, now twenty-three days old.

February 24, I found a drone pupa on the alighting board.

February 27, examined all the combs and found drones hatched and brood in all stages of development in two combs, containing only worker cells. I saw drones emerge from these cells. Removed these combs as specimens, also a few of the small drones that were hatched. I put into the hive bar frames containing drone combs. I saw the beautiful virgin queen.

March 6, examined the combs and found eggs and brood in two combs.

March 31, a number of drones flying out.

April 7, examined all the combs and found about one quarter of the bees were drones. I supplied the stock with several worker brood combs, taken out of other stocks, and I saw this virgin queen frequently from April to June, and she continued to lay eggs that produced only drones, not in the order that a fertile queen lays eggs, but here and there one, so that the combs with the sealed drone brood, with its conical covers, had a very singular appearance. She also sometimes laid two eggs in one cell, which, in some cases, came to maturity; the bees enlarging the entrance to the cell to the size of two cells, and thus covering the two larvæ with one large conical cover.

In June I removed this virgin drone-breeding queen, and placed her in my entomoligical collection, and gave the stock a beautiful young Ligurian queen.

There never was a clearer confirmation of this wonderful doctrine of true Parthenogenesis, as I never read or heard of a queen being hatched so late in the season as the 22d of October, and afterwards kept until the June following, producing only drones.

Altogether the experiment was very successful and most interesting, as it was the first time I had ever seen or heard of two bees coming to maturity and being hatched out in the same cell, perfect drones.

WILLIAM CARR,
CLAYTON BRIDGE, NEWTON HEATH, NEAR MANCHESTER, ENGLAND.

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THE Italians call the honey-emptying machine a "*smelatore*" How will that name suit the fastidious who desire brevity?

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THE very essence of all profitable beekeeping may be condensed into Oettel's Golden Rule:—KEEP YOUR STOCKS STRONG.

[For the American Bee Journal.]

## Product of Honey, Location, and Size of Hives.

When I read friend Hazen's articles about his beehive, I came to the conclusion that he writes under the impression that it is only necessary to give the honey bee a roomy habitation and ample space for storing honey, to obtain in any location from 100 to 300 pounds of surplus honey from a single colony of bees. If this were so, why do we not get up a beehive as large as a good-sized barn? We might then get honey by the thousand and the hundred thousand pounds, without being compelled to oversee and manage a large number of stocks. Other beekeepers, too, seem to write under the conviction that no other hive than one of their own invention, can give us a large amount of honey.

Now, I am a beekeeper of no inconsiderable experience. I am forty-five years old, and, with the exception of one year, when I came to this country, I have kept bees from my seventeenth year, in numbers varying from a single colony to eight hundred. I have kept bees in tall hives and in low ones; in wide ones and in narrow ones; in wooden hives and in straw hives; and in hives with inside measurement varying from 700 to 4,800 cubic inches in the main apartment. I have used hives with only one cap-box for surplus honey, and others with boxes varying in number up to twelve. I experienced what I considered extra good honey seasons, and also some so poor that my stocks had on an average not more than five pounds of honey on the first of November. And I must say that I never obtained so large an amount of surplus honey from one or from many hives, as I notice reported in the JOURNAL by some beekeepers. I often ask myself why is this so? It cannot be on account of the hives I used, as I have used and tried an immense number, of different shapes and sizes. And I conceive it cannot be owing to the management, as I have tried natural swarming and artificial; I have fed the bees with rye flour and honey in early spring up to the time when they could gather supplies for themselves. I had them populous enough to turn off strong swarms in May. I have placed swarms in empty hives, and in hives filled with combs; in tall hives, as well as in shallow ones. I put on surplus honey boxes before swarming and after swarming. I put boxes on large prime swarms immediately after hiving them, or soon afterwards; but, with the exception of about a dozen cases, I obtained no greater yield of surplus honey than twenty-five pounds from any single hive, or an average of about fifteen pounds each, from the whole number; and this yield was secured in a few seasons only, and since I keep the Italian bees.

Is it not a shame for me to acknowledge such results as these? Would it not better advance my interest, as a dealer in bees, to get up a statement of an immense yield of honey secured by Italian bees, native-bred or imported? Some of my beekeeping friends will be ready to exclaim—"I know where the trouble is with you. You keep too many stocks in one place." And

is this a satisfactory explanation of my failure to obtain a large amount of surplus honey? I am constrained to say No!

When I commenced beekeeping in this country, I had only one colony, which doubled itself the first summer, but gave me no honey. In ten seasons, during which my stocks had, by natural and by forced swarming, increased to fifty-three, I obtained surplus honey from hives and caps only in two seasons. My swarms then were kept in standing hives of from 2,000 to 2,600 cubic inches contents, with caps for surplus honey; and they were always wintered on their summer stands. In some of those seasons, even good, strong, early swarms did not do more than gather a winter's supply; and second swarms I was able to winter only in one season. Some beekeeping friend will now be ready to ask—"Had your beekeeping neighbors no better success the while?" And the reply is—"they fared neither better nor worse." Not one of them was able to increase the number of his stocks to equal mine, though they seemed to be equally ambitious. All of them, except one, have now abandoned beekeeping, and that one has only two stocks left. A few other stocks, kept six miles from me in an easterly direction, have not given any surplus honey for a number of seasons, and have not increased in number.

It is different, however, only three miles off, south, west, or north, from the location of my home apiary. There bees are yielding some surplus honey, even in common seasons; and a few who keep their stocks in cellars over winter, are doing quite well. At the distance of only three miles the weather cannot be much different; and the question presents itself, why do bees do so much better there? It doubtless is not because of their management, as they are nearly all kept in common box hives and left to natural swarming, without any more interference than hiving the swarms and putting on boxes. The bees find about the same kinds and quantity of flowers in both quarters; but the yield of honey must be very different. In twenty-one years, the bees in my home apiary have not gathered a pound of white clover honey; nor, with the exception of one season, have they stored any in boxes from buckwheat; while some of my neighbors, three or four miles off, have had white clover and buckwheat honey stored in most seasons. I saw four acres of buckwheat for three seasons, within a quarter of a mile of my apiary; but noticed the bees at work on the blossoms only about two days in a season. During white clover and buckwheat time, my bees are as busy as they can be. They gather large amounts of pollen, and rear great quantities of brood, but do not seem to increase in number or in weight. When compelled to go three or four miles in quest of pasturage, they doubtless lose a large number of workers, and use all the honey they gather in sustaining the brood.

Now, what is the cause of the difference in locations? It doubtless arises from the difference in the soil, that induces a poorer or a more plentiful secretion of honey in the plants or flowers growing in each. No amount of room in a hive or in surplus honey boxes, will make a difference of more than a few pounds in the yield of honey by any one hive. On the contrary, I have for the last six years obtained all my surplus honey from hives that have not over 1,700 cubic inches room inside the eight frames they contain, the spaces between the combs counted in;—and from hives considerably smaller than these.

A hive containing 4,800 cubic inches, has not given me more than one natural swarm and two forced ones in six seasons, and not a pound of surplus honey, either from the hive or in caps. From hives with eleven Langstroth frames I scarcely ever get any surplus box honey; and in most seasons the bees do not fill those hives with combs before they swarm. Under such circumstances, would it be advisable to procure those hives with the large amount of room for surplus honey, which friend Hazen recommends? Or will hives that in every ordinary season contain honey enough to winter a swarm on, be large enough? For my part, I came to the conclusion some years ago that the hive with eight Langstroth frames only, with room for six 5-lb surplus honey boxes, are large enough for my location. I am of opinion that it is the duty of every beekeeper to find out what honey resources he has in his location, and get up a hive proportioned in size to the yield of honey, and which will contain honey enough to keep his bees in good condition at all times. That a queen bee will lay as many eggs in a large hive in a poor season as in a good one, is something that is contradicted by experience, at least in my location. With me large hives have proved unprofitable, both as regards swarming and as yielding surplus honey. Experience and observation have not, with me, proved that 30.000 worker bees will store up nine pounds of honey, while 10,000 will not store more than one. To my knowledge, I have not yet seen it stated that a queen ever has laid or would lay three thousand eggs, or even two thousand, per day for thirty consecutive days. If a queen, in some few instances, was coaxed to lay nearly three thousand eggs per day, it does not follow that she will do so for a month or a season. My advice to beekeepers, therefore, would be—study the honey resources of your location, and get up a hive adapted to them.

A. GRIMM.

JEFFERSON, WIS., Nov. 1869.

[For the American Bee Journal.]

## Worker Bees in Drone Cells.

Mr. J. M. Marvin, in the BEE JOURNAL for January, 1869, page 140, tells us that bees put in a hive containing drone comb exclusively, changed the cells to the size of worker cells, by making them funnel-shaped inside, in order to raise workers.

In the October number, page 82, Mr. H. Alley reports the same experience; but does not say whether the bees narrowed the cells, as in the Marvin experience.

In so uncommon a case, an account of all attending circumstances will be welcomed by beekeepers, as these may throw some light on the determination of sex in the eggs of bees.

CHARLES DADARTT

HAMILTON, ILLS., Nov. 4, 1869.

[For the American Bee Journal ]

## Extra Profits of a Hive of Bees.

### Number 1.

Large profits of a hive of bees, belonging to a man in the dairy region of Kane county, Illinois. Increase of stocks, ten; making eleven, counting the old hive, yielding twenty-five pounds of box honey, and leaving enough in the hives to winter the entire stocks. Six hives of empty combs were used in making the new swarms. This experiment by a beekeeper having only twelve months' experience, shows partly the value of empty combs. What will mechanics, arts, and science do, when beekeepers cease the sale of wax? It is worth at least quadruple as much to the beekeeper as he gets for it after the combs are melted into wax; that is, if he has or will acquire the knowledge of using comb properly.

| | |
|---|---|
| Value of stock hive | $25 00 |
| Cost of 10 hives, for swarms, $3 | 30 00 |
| One set of boxes | 30 |
| Value of set of empty combs, if melted in wax, 6 lb @ 40 cts | 2 40 |
| Feed in spring, 30 lb sugar @ 20 cts | 4 00 |
| Time in management, 40 half-hours, or 2 days @ $3 | 6 00 |
| | $67 70 |

Value of Present Stock.

| | |
|---|---|
| 11 hives of bees, $20 | $220 00 |
| 25 lb surplus honey, @ 30 cts | 7 50 |
| | $227 50 |

Balance, or profit, one hundred and fifty-nine dollars and eighty cents, ($159 80).

### Number 2.

A hive of bees sent to Minnesota has increased to fifty-four in three years, besides one sold the first year and eight lost the second winter by trying to winter them on their summer stands. The yield of honey should have been and probably was large, as frequently there was too much of it in the hives for the bees to do extra well. This is doing well for a beginner, and a woman; and shows the value of the American Bee Journal that gives the knowledge to get large profits.

### Number 3.

A hive of bees sent to Chicago, increased to four; and gave forty pounds of box honey as surplus. They were managed by a new beginner.

Extra Yield of Honey.

Amount of honey taken from one stock hive in an apiary of one hundred increased to two hundred:

| | |
|---|---|
| Extracted with a machine | 190 lb. |
| Box honey | 60 lb. |
| | 250 lb. |

The one hundred original stocks and one hundred increase gave 3,000 lb of honey extracted by machine, and 3,000 lb box honey as surplus—total, six thousand (6,000) pounds.

### Number 4.

A hive of bees sent last spring to Cook county, Illinois, increased two. The old one and two new ones gave fifty pounds extracted honey as surplus.

A Hint worth knowing.

Use pure beeswax in preparing for service all wooden ware that is used in the dairy, and all pails for drinking water. Put in a lump, then use a hot iron to melt the wax and drive it in the pores of the wood. Thus your milk pails, butter bowls, churns, and water pails will be kept from absorbing moisture or impurities.

Profits of Buckwheat.

The bees in our farm apiary, in the vicinity of buckwheat fields, have done better than those at our home apiary. Twenty-two stocks increased to forty-six; and gave seven hundred and fifty pounds extracted honey and one thousand and sixty-four pounds of box honey—total eighteen hundred and fourteen (1814) pounds.

J. M. Marvin.

St. Charles, Ills.

[For the American Bee Journal.]

## Blossoming of Trees and Plants at Carthage, Indiana, in 1869.

Soft maple, February 12; red elm, April 2; willow, April 3; water elm, April 4; lombardy poplar, April 5; ground ivy, April 16; sugar maple, April 23; peach, April 23; pear, April 25; gooseberry, April 27; red currrants, April 28; buckeye, April 29; apple, May 2; tulip poplar, May 28; linden or basswood, June 30.

The above constitute most of our bee trees and plants. The date of the blossoming of white and red clover, I neglected to note. My Italian bees worked freely on the second crop of red clover. Not much buckwheat is seen in this county.

My first swarm issued May 15; my last one August 18.

I have my hives so arranged that I can remove my bees from one honey location to another, in the hottest weather. I move them on spring wagons. I removed twenty-five hives of my bees twenty miles, to a poplar grove, on the 26th of May, and brought them back on the 26th of July. I obtained a little over twelve hundred pounds of liquid honey from them during that time.

P. W. McFatridge.

Carthage, Ind.

[For the American Bee Journal.]

## Letter from Iowa.

MR. EDITOR:—I suggest that your correspondents who keep bees give, through the "BEE JOURNAL," their modes of artificial swarming, and how they keep their combs straight; in fact let us have their entire management of bees. Also, how they pack honey for shipment to market; where they sell it; the prices obtained; the present and the prospective demand. There are but few beekeepers that would not receive some benefit from such communications, if honestly and faithfully written. Let us have the facts—no theories.

I came through the winter with fifteen stocks. Eight of the best were selected for the collection of honey. The spring being so very wet made me afraid to divide the whole. Two of the eight swarmed, and the swarms went off into the woods. I had taken five frames of brood and honey from one of these stocks, and two frames of brood and about half a gallon of young bees from the other.

My Langstroth hives are fitted for two sets of boxes, the American for same box, and other small frames for surplus. Two of the Langstroths gave me fifty-six (56) 5-pound boxes gross. One of the eight failed to give me a swarm or any surplus, through some accident to the queen. I have now twenty-nine stocks. The amount of surplus honey was eleven hundred (1100) pounds box honey, except four gallons of strained honey. These results are quite satisfactory, if I could only sell the honey at a reasonable price. All I have sold as yet has been for twenty cents a pound in store goods.

My favorite mode of dividing is, to take the parent stock and place it two or three feet on one side of the old stand; get an empty hive with all the frames in place except one; open the parent stock, take out a frame of brood with the adhering bees, *paying no attention to the queen*, and place it in the empty hive; then lift out the frames one at a time, shake off the bees in front of your new hive, replace the honey board, and the division is made. If the old hive gets too many bees, move it a little further off, and *vice versa*.

Another way is to hunt out the queen and return her to the parent stock. The old bees, not finding their queen will return to their old stand. The young bees will remain and raise queens better than the old ones. When making swarms in this way, the old stock must be put on the old stand. The "nucleus" can be put anywhere you choose. When the young queen becomes fertilized, give frames of capped brood. If made at the proper time, the parent hive will hardly miss what is taken from them. More anon, if this suits.

FREDERICK CRATHORNE.

BETHLEHEM, IOWA.

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THE common locust and the honey locust are very desirable trees for the vicinity of an apiary, yielding much honey at a time when peculiarly valuable to the bees.

[For the American Bee Journal.]

## Burying Bees.

Some years ago a friend informed me that he had kept bees in Massachusetts, and the better to winter some young swarms that were short of honey, he had buried them. He said he always selected those that he judged would not winter in the common way. He had buried some at different times, he judged as many as twenty stocks in all, and never lost any by so doing. They always did well.

Following his instructions, I that winter buried two weak colonies in a coarse sand bank. I put them beneath the frost, gave them no ventilation, and filled the gravel in against and on top of the hives. Some space was left beneath the hives, to secure them against damage by water. The bees were put in on the 18th of December, and taken out on the 14th of April following—being as early as the ground thawed over them. The combs were not badly molded, and there were only about a dozen dead bees on each bottom board, which I presume were there when the hives were put in. Those bees did well the next summer.

Last fall I buried four hives in the same way, except that I put them in fine compact sand. Two of these hives were well filled. They all molded pretty bad; the two full ones were lost as a consequence, and besides, the bees of the other hives died as much as others wintered on their stands. Both the stocks that survived did very well for the season this summer.

As the honey season here has been very poor, and I have a number of young swarms that have but little houey, I have resolved to bury ten of them in a gravel bank, but shall give them ventlation this time. I mean to put them in just before winter sets in.

I use the Colton hive. Movable comb hives and Italian bees are scarce here.

The fact that bees can be wintered well a number of feet under ground, without ventilation, and with the ground frozen over them, is (with me) good evidence that bees need but little air in winter.

ALONZO BARNARD.

BANGOR, ME., Nov. 5, 1869.

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[For the American Bee Journal.]

## Borage Seed Wanted.

We frequently find, in reading works on bees, that *Borage* is highly recommended as a bee pasturage.

Why do not some of those who cultivate this plant advertise the seed for sale through the columns of the BEE JOURNAL, as they do their Alsike clover seed?

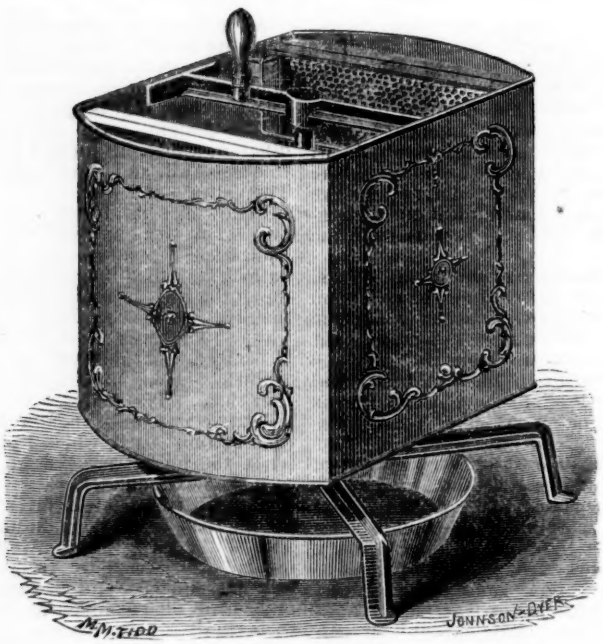
We feel confident that any one so doing would be well repaid, as, in some sections, it is impossible to find this seed, though we have heard it inquired for times without number.

L.

DECEMBER, 1869.

[For the American Bee Journal.]

## Peabody's Honey Extractor.




The above engraving is a perspective view of a new honey extractor, which has been practically tested during the past season, and is now ready to be introduced to the beekeeping public.

The machine consists of a tin case, in shape somewhat resembling a common wash boiler, adapted to receive honey frames of any size, across either end, and is made to revolve upon a central stationary spindle, set in the cast iron base.

The bottom of the case is made sloping towards the centre, and has a metal casting of peculiar form soldered into the centre of the same, through the centre of which passes the spindle on which the case revolves, and in which are also formed outlet passages, through which the honey is discharged.

A cast iron bar is securely attached to the top of the case, extending across the same from side to side, in the centre of which is formed the upper bearing of the spindle, and which is also inserted the handle by which the case is revolved.

A frame of wood, resembling a common honey frame, and covered on one side with wire gauze, is suspended across either end of the case, upon brackets provided for the purpose, with the wire gauze towards the centre, and a frame of honey is suspended by the side of it with one face of the comb resting against it, in the usual manner.

When the case and contents are set in motion by means of the handle, the honey will be discharged into the space between the wire gauze and the curved end of the case, and when the rotary motion ceases the honey will flow to the centre of the bottom of the case, and through the openings in the central casting, and through similar openings in the hub of the cast iron base, and be delivered into the pan seen in the cut.

This machine was invented by H. O. Peabody, of Boston, Massachusetts, brother of the undersigned, and patented October 26th, 1869.

For further information, send stamps for circulars to

J. L. PEABODY,
Virden, Macoupin County,
Illinois.

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BEE THIEVES ABOUT.—Mr. Geo. H. Knight, who resides on Front street, near Columbia, takes a great interest in raising bees. He has a large number of hives; but every now and then some rascally person steals one. Last night Mr. Knight's premises were visited by thieves, who killed all the bees in one hive by introducing chloroform into it. They then carried off about twenty-five pounds of honey.—*Newport, Ky., paper.*

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THE blossoms of onions abound in honey, the odor of which is, however, offensive when first gathered, but with the lapse of time this gradually disappears.

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Care should be taken to shelter hives from piercing winds during winter.

For the American Bee Journal.

## Conklin's Diamond Hive.

Dr. Conklin having patented the hive invented and made public property by my surrendering my rights of invention, I submit the following statement of facts:

I made the invention public property on or about the 1st of March, 1868. The description and drawing were made on the 22d of February. I was then going to make a claim for a patent; but on consideration I concluded to abandon the invention to the public, which I did on the 1st of March, by sending description and drawing to the "*American Agriculturist*," New York, AMERICAN BEE JOURNAL, Washington, and *Western Rural*, Chicago.

The following letter was received, in reply, from the office of the *American Agriculturist:*

OFFICE OF AMERICAN AGRICULTURIST,
No. 41 PARK ROW,
NEW YORK, 9th March, 1868.

*To John M. Price, Buffalo Grove, Iowa:*

DEAR SIR: The letter to Mr. Judd was put into my hands on the 7th inst. I fear now that it will be hardly possible for us to use the description of your hive sent for the May number.

You may or may not be aware that there is another hive, almost exactly on the same principle as yours, patented. The man had his model in our office only a few months ago, and I understood then it was patented. It may be that this is the same hive. Will you have the goodness to let me know when the hive was invented; when first used; if it infringes any patent you know of.

The plan struck me as an admirable one; but I should think it would be worthless as a movable frame hive, unless it employed Langstroth's patent.

If you answer so that we can get your letter by the 17th, it will be in time for the May number.

Very respectfully,
MASON C. WELLS,
Agricultural Editor, for O. Judd & Co.

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OFFICE AMERICAN AGRICULTURIST,
No. 41 PARK ROW,
NEW YORK, 3d April, 1868.

*To John M. Price, Buffalo Grove, Iowa:*

DEAR SIR: The name of the man who has patented a beehive similar in principle, as I view it, to the one you send,* which was duly received, is *Bingham*. I *cannot* give you his first name. However, if you write to Mr. Bingham, owner of Bingham's Patent Bee Hive, Cassadaga, Chautauque Co., N. Y., you will probably hear from him. Ask him for a circular, send a few cents in postage, and say you heard about his invention through a friend.

MASON C. WELLS.

I also sent a description and drawing to Mr. E. Gallup, of Osage, Iowa, which he mentions on page 30 of the August number of the AMERICAN BEE JOURNAL, 1868, article on Bee Feeding.

In April, Mr. James Cotant made and used two of these hives, at Buffalo Grove, Iowa.

In May Mr. Charles Jackway had in use two of them at Buffalo Grove, Iowa.

In May, Mr. F. M. Hunt, of Independence, Iowa, had in use one of them.

I had in use thirty-two of them, by, I think, the first of June.

In August I received the following letter from Mr. Samuel Wagner, in reply to one of mine.

* I answered his first letter, and sent him a working model, which is duly acknowledged in this letter of April 3.

WASHINGTON, D. C., July 31, 1868.

*John M. Price, Esq.:*

DEAR SIR: I deferred noticing your description of your hive, as it requires a wood-cut for illustration, and we have no wood engraver here now. The cuts for the Mechanical Report of the Patent Office are engraved at Buffalo, N. Y. If I cannot procure a cut, I will still endeavor to use your description at an early day.

Yours truly,
SAMUEL WAGNER.

On receiving the above letter, I made a working model and sent him a better description and drawing, which he mentions in the following letter:

WASHINGTON, D. C., September 26, 1868.

*J. M. Price, Esq.:*

DEAR SIR: I duly received, per express, the model of your hive, and am much pleased with its arrangement, though it is of course not possible to judge properly of its adaptedness and value, except on actual trial. The drawing and description came to hand likewise. I had a reduced copy of the former made, and expected to have a cut engraved in season for the October number of the BEE JOURNAL, but regret to say it it could not be finished in time for the printer, so that it will have to be delayed a month longer.

Yours truly,
SAMUEL WAGNER.

All of the above correspondence took place before the 1st of October, 1868, and on the 20th of October, 1868, a patent was issued to Dr. A. V. Conklin for his Diamond Frame Hive. See his "claims."

The one hundred or more readers and subscribers of the BEE JOURNAL, who have written to me, expressing their desire to use the hive, can see by the above correspondence their perfect right to do so, subject only to Mr. Langstroth's claims on the principle.

J. M. PRICE.

BUFFALO GROVE, IOWA.

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For the American Bee Journal.

## The Rectangular Frame.—Rejoinder.

MR. EDITOR:—(I cannot help feeling sorry for Mr. Editor, who has to hear everybody's attacks and everybody's defence; but, as Mr. Editor really means all his readers, I say Mr. Editor too.) In the November number of the BEE JOURNAL, Mr. Miller, of Peninsula, Ohio, directs his *battery* against the Rectangular Frame Hive and myself. In courtesy to him I answer his request. First, let me say to Mr. Miller, it is too late in the day to make that kind of attack on the rectangular frame hive as I have them, as they are too widely circulated and too many of them are in use to do it any injury. Since reading your article I have examined hundreds of the "Diamond Frame Hives" in this section that were filled the past season, and here is the certificate of the owners, "since you doubt my statement."

"Dr. Conklin showed us Mr. Miller's attack of him and his *Diamond Frame hive*. He then opened our hives and removed all the frames (some of them had not been opened since the bees were put in them), without cutting or breaking a single comb. We have handled the Langstroth, American, and several other frame hives, but never saw a hive that the combs were always so straight in the frames. Mr. Miller's attack does not apply to Dr. Conklin's Diamond Frame Hive. He then

took us to his apiary, and opened forty of his hives. Each comb was built straight in the frame.

(Signed) H. L. OSBORN,
B. WOOD, P. M.
JESSE HARKNESS,
G. J. WOOD, Justice of Peace,
AARON BENEDICT, Italian queen breeder,
BENNINGTON, OHIO.

"I take stock in the Diamond Frame Hive. The combs are all straight in the frames."

(Signed) A. J. COOK,
Agricultural College,
Lansing, Mich."

Now, Mr. Miller, my bees, as well as the bees of all the above-named parties, with many others, "*know their duty to their owners and will do it just so well,*" in the Diamond Frame Hive, which you or anybody else can purchase for a reasonable compensation. Or you can "get the secret of training them" in the Diamond Frame Hive with the same results, if you possess "compos mentis" enough to set your own hive level. The hives you made, or the bees in them, must have been very inferior and should have been destroyed, instead of selling them to the beekeepers of the old school, since the people have been kept in doubt and darkness long enough by the "would-be knowing ones." Let us have "more light" approaching from the East," and more "substitute" returning from the West, in compensation for the JOURNAL. So hurrah for the BEE JOURNAL, and the one that can obtain the most bees and honey, in the best hive, during the season of 1870.

A. V. CONKLIN.

BENNINGTON, OHIO.

For the American Bee Journal.

## Bees in J. M. Price's Square Frame Double-Cased Bee Hive.

Mr. M. Miller, of Peninsula, Ohio, having given in his experience with bees in square frames hung angling, I have only to say that what he says on page 99, No. 5, vol. 5, of the AMERICAN BEE JOURNAL, is *absolutely true*, and will be so *invariably* in any hive made as his or Dr. Conklin's Diamond hive is. But if Mr. Miller will make a hive like mine, with its two movable sides or division boards, (No. 20, of description), and then read Mr. Gallup's article "How to Ventilate," on page 8, vol. 4, of the AMERICAN BEE JOURNAL, he will get a good idea of my management to get straight combs; the *rule*, not the *exception—straight combs every time; impossible to be otherwise.* I generally start a swarm with two full frames of comb and brood, and three empty frames, placed alternately, with a division board placed close to each of the outside empty frames; thus forming a tight hive of five frames' capacity. When the bees have filled the three empty frames, I move the division boards out towards the outside and put in two more empty frames; and repeat until the hive is full of frames. By having every alternate frame only empty, the bees cannot do otherwise than make the comb straight.

My hive, as described in the BEE JOURNAL is free to all, to make and use, who have paid Mr. Langstroth for a right to use his principle in bee hives, as I have done. I have in use both forms of hive, his and mine, and I think mine, made according to description, is a little ahead of any other hive, except my own last invention —my Movable Casket Bee Hive. For ease of management—stimulating the queen in early spring, for the early production of brood; or to stimulate the queen to keep up the production of brood during a temporary drouth in the summer; and for the more effectually wintering bees in any climate, I believe my Casket Hive is without an equal. All who have seen it, pronounce it perfection reached.

JOHN M. PRICE.

BUFFALO GROVE, IOWA.

For the American Bee Journal.

## Shallow Langstroth Hives.

I began beekeeping with "box hives," but soon found that, in order to have control of my bees, they must be in movable comb hives.

As the Langstroth hive was the only movable comb hive used to any extent in this section, I procured the right to use it, and have used it with great success.

My hives are mostly of the shallow form, being 8½ inches deep inside of the frames, or 10 inches including space above and below the frames.

I have taken nearly double the amount of surplus honey from my hives of the above depth the past season, that I have from other hives that were 14 inches deep and upwards and contained equally prolific queens with a similar amount of bees in the spring and did nor swarm. The bees worked more diligently in the shallow hives than in the deep ones.

My experience thus far teaches me that I can obtain more honey from a hive of the first named depth, than I can from one of greater depth of frame, if the frames hang square in the hive and the surplus boxes are placed above the frames. But as for bees wintering in such hives on their summer stands, in northern districts, as well as they will in a more compact form of hive, such as Mr. Alley's form of the Langstroth hive, or Mr. J. M. Price's double cased hive, I do not think they will.

To winter bees with good success, on their summer stands, in the northern districts, it is necessary that the heft of the honey should be directly above the cluster of bees, and the two hives named above greatly facilitate that object.

I am in favor of Mr. Greene's suggestion. So here goes. I, George M. D. Ruggles, twenty-four years old, was born in Washington county, Vermont; lived ten years in New York, and have resided nine years in Hartland, Vermont; am a farmer, and keep bees. The enclosed needful will enable the Editor to take the hint, and continue to send the JOURNAL to my address.

GEORGE M. D. RUGGLES.

HARTLAND, VT., Dec. 14, 1869.

For the American Bee Journal.

## J. W. G.'s Five Questions Answered.

1. In counting the "three yellow bands" on full-blooded Italian bees, is the narrow strip next to the thorax included, or should they have three *besides* that?

The Italian bee bred in Italy has generally but two yellow bands, and including the narrow strip next the thorax, three. But Dzierzon has raised a much more beautiful race. The workers of his full-blooded bees have three yellow bands, *exclusive* of the narrow strip.

2. What should be done with a good colony containing a fertile worker? Could an unimpregnated queen, or a fertilized one be successfully introduced?

A *good* colony has no fertile workers, and as soon as such make their appearance the colony must be regarded as diseased. Colonies without queen and with fertile workers, behave variously. Some accept introduced queens, and some do not. In any case a fertilized queen will be more easily received.

3. Will bees with fertile workers build drone or worker comb?

Such colonies generally do not build at all; but when they do, they build drone comb, with very rare exceptions.

4. What is the greatest age at which a queen can be or is fertilized.

Generally it may be said that she is able to be fertilized so long as she continues to fly out. In Germany there are unquestionable cases on record, where queens which were forty days and more old, still became fertilized.

5. What is the average number of times a good bee-keeper will "go into" (open and examine) his hives in the course of a season?

This question is not to be definitely answered, for the opening of hives depends on circumstances; and the special purposes of the bee-keeper. For instance, if he is desirous of multiplying stock, he opens his hives more frequently than when he simply wishes to obtain much honey.

LINA BARONESS VON BERLEPSCH.

MUNICH, Nov. 20, 1869.

For the American Bee Journal.

## Bee Feed.

I have used the following for a number of years: About one quart of water, two teaspoonsful of starch, made the same as ladies prepare it for starching clothes. When boiling, add five pounds of white sugar; stir it until it boils again; take it off the fire, and add as much honey as you can spare.

JOHN WINFIELD.

CANFIELD, OHIO.

For the American Bee Journal.

## Querist's Question, No. 7, Answered.

MR. EDITOR:—I beg leave to answer one of Querist's questions on page 83 of the BEE JOURNAL. He says that I guarantee all the Italian queens I sell, and if any fail to produce workers with *three* yellow bands, that I will replace them free of charge. So I do, and will.

My reason for saying this, is—I have often had queens of my own rearing, and some I have *bought* and paid *high* prices for, that produced workers with three stripes for some months, and then failed to produce *all three* striped workers, as occasionally there would be a *two* striped fellow. Such queens I consider *not* pure. As my customers are generally in a *great hurry* to get their queens, I, like many others, and perhaps all queen raisers, send queens to those that are in such a *hurry*, after the worker progeny of the queen has been hatching a week or ten days; and if *all* have the three yellow stripes, they are considered pure and sent off to the customer, and in case they are purely fertilized, are pure. But, as it is evident that the queens often mate with two or more drones, their progeny may all show the marks of purity for a time, and afterwards show the *mixed* blood, as one of the drones may have been of the black race.

Querist asks are three yellow bands a proper test? That is considered a proper test by the best apiarians, both in America and in Europe. So what further test does Querist want?

Querist says, suppose I was to raise a hundred Italian queens, and should produce workers thus marked, how many of those queens would I be willing to use for *queen breeding* purposes? Well, sir, I would give them *all* a thorough trial (provided I needed so many to breed from), and if all continued to produce workers with the three yellow stripes for some months, and no variation, I would be willing to breed from all the hundred.

I think bees, like all other stock—sheep, cattle, &c—are susceptible of improvement, though they are thorough blood; and to improve my bees, I would select such queens as produce workers most *quiet to handle* and most prolific, and produced young *queens* that were all like their mother in color, or lighter.

Querist seems to take exception to me and some others, for selling queens at *knock-down* prices, by the quantity. I explained in my circular the reason why I could afford to sell queens so cheap *this* season. It was because all the black bees had died last winter for some miles around me, and of course I had no trouble in getting my queens impregnated by my own drones. Don't grumble, Mr. Querist, I will not sell any more queens so cheap, as some black bees have emigrated from parts unknown, and located in the woods around me; and I will charge higher prices next season, just in proportion to the trouble I have in raising them.

I hope to have my queens all fertilized, next season, by the drones I may select, by the new process which I suppose will soon be published.

I should have written this for the November number of the JOURNAL, but did not get my October number number till yesterday. So do not think I am asleep, Mr. Querist, but like yourself, I read every article in the BEE JOURNAL with care, and then lay them away to have them bound, as I have the first four volumes in two books; and when I have nothing else to read, I often re-read many articles in them, with much interest. Hoping this will satisfy friend Querist, I am, yours truly,

H. NESBIT.

CYNTHIANA, KY., Nov. 7, 1869.

For the American Bee Journal.

## Natural Swarms.

I clip the wings of all my queens as soon as they commence laying; then, when a natural swarm issues, the queen falls to the ground. I seek for her carefully, and as soon as most of the swarm is out, I move the hive away ten or fifteen feet, and set an empty hive with frames all in proper position in the place where the hive that has swarmed stood. I keep the queen till the swarm begins to return, which it always will do when the queen is not with it, even if it has meantime alighted and clustered. In a little while back they *will* come. Now place the queen on the alighting board, and watch her till bees enough come back to induce her to enter the hive, and all is right.

Then take a fertile reserve queen, cage her and put her between two of the brood combs in the old hive from which the swarm issued, after removing or destroying all the queen cells. Keep her caged two or three days, then release her, and the work is done. Egg-laying, in the old hive, is stopped only three or four days, and in a little while the old hive will again be strong in bees. This season, nine treated in this manner nearly all swarmed again, sending off good strong swarms.

P. W. MCFATRIDGE.

CARTHAGE, IND.

For the American Bee Journal.

## Profits of Beekeeping.

From seven full swarms (ten frames of comb each) wintered through last winter, I have obtained seven hundred (700) pounds surplus honey, and have on hand twenty-five swarms of bees. I used the revolving honey-emptier, and had no honey stored in boxes. Whole amount of full frames of combs and honey on hand 350 pounds, making an increase of four-fold.

| | |
|---|---|
| 18 new swarms, @ $10 each | $180 |
| 700 lb honey, @ 25 cts. ℔ pound | 175 |
| Total | $355 |

Which is $50 on each of the seven swarms. They were mostly hybrid Italians.

J. L. PEABODY.

VIRDEN, ILLS.

For the American Bee Journal.

## Experimenting.

On the 10th of July, 1868, I hived in my northern apiary a middle-aged swarm of bees, in a hive nearly filled with comb, and caged the queen—suspending her between the two central combs. This swarm filled the combs about two-thirds full of honey while the basswood trees were in blossom, closing July 25th. At that time I found the combs of a hive which I had stored away in my bee-chamber, and which contained about fifteen pounds of honey, were largely infested by worms, and I had concluded to let the bees carry out the honey. Fearing I might cause robbing, I carried both hives to the cellar and placed them on the floor, about three feet from the cellar door. In order to start the bees immediately I shook them off from one of the frames into the hive I intended to have cleaned, moved the two hives close together, and closed the cellar door. When thus closed, the cellar was perfectly dark, except that between the bottom and the door frame there was a small opening about a quarter of an inch wide. I had no idea that the bees would crawl three feet over the sandy floor of a cool cellar, and make use of that small opening for an entrance. Two weeks later, to my great surprise, I found that this colony had actually become accustomed to its new location and entrance, and had gone to work. They had carried nearly all the honey from the worm-infected hive to their own, and built some new comb.

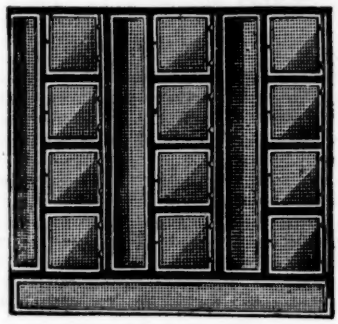
To ascertain how long a colony would survive without an addition of brood or bees, with its queen caged, I left this colony in this condition, in the cellar, till the 20th of September, when I found it had increased its stores somewhat, and still contained about three pints of workers, with the caged queen apparently in perfect health. It had not become drone-breeding, and had gathered and stored very little pollen. During the period of the basswood blossoms it had gathered only about as much honey as other swarms of the same size, although it had no combs to build; and in the month of August it stored scarcely one-fourth as much honey as other swarms with queens at liberty. I could not, therefore, say that it would be advisable to keep the queen of a colony caged for the purpose of saving all the honey that bees gather. It would seem that the worker bees do not labor with the same energy and perseverance, as when they have brood to nurse and provide for.

ADAM GRIMM.

JEFFERSON, WIS.

CHLOROFORMING BEES!—"Sometime after this, I attempted to quiet an angry swarm of bees by slipping under the gum a sponge containing something over half an ounce of chloroform, and succeeded admirably. When they had become quiet, I removed what honey could be spared from their stores, and left them all quiet. They are quiet still, for the chloroform killed the last bee!"—*Dr. A. Love, in Southern Cultivator.*

For the American Bee Journal.



**The Queen Nursery**

is a *new invention* for raising queen bees at less than one-fourth of the former expense of raising them, besides securing their perfect safety up to the period when they should pass out to meet the drones.

It is secured to the inventor by letters patent, dated November 23, 1869. It is composed of a frame m de of the size of a frame in any movable comb hive, divided into compartments consisting of one or a series of c ges, covered and open ways.

The cages (permanent, or movable at will from the frame), are made in a square form, with a right-angled triangular piece of tin on each side of them—making a place between the tins to secure the feed for the young queens while in confinement. This feed consists of honey in the comb, or a sponge saturated with it. One side of each compartment is covered with fine wove wire cloth tacked fast. The other side of the nursery over part of the ways, is covered in the same manner; but the cages on this side of the nursery are covered with the wire cloth cut into pieces 2½ inches square, rimmed with tin, hinged, and hung as doors. The open ways are for the purpose of letting the worker bees pass from comb to comb, on each side of the nursery, when it is placed in the centre of a strong colony of bees, in place of one of the centre combs removed for the purpose.

The cages and ways are covered with wire cloth to protect the queen cells, incipient young queens, and their food, as long as they are required to be kept in confinement. Also, to secure the equal dissemination of the heat required to hatch and mature the new queens. The apertures from the cages into the covered ways are for the purpose of liberating the queens at the proper time. This is done by removing the tin slides which close the apertures. But one queen should be liberated at a time. They may also be liberated by opening the doors of the cages, or if the cages are removable from the nursery, they can (whenever desired) be removed to any hive where a queen is wanted, and there liberated.

The covered ways are thus arranged so that the young queen can pass clear to the entrance of the hive without danger of being destroyed as she goes out to meet the drones. And as she thus passes out for fertilization, can be caught in the "queen catcher" and confined with choice drones, as described in the AMERICAN BEE JOURNAL, vol. 5, No. 1, page 19.

To operate the nursery, cut from the combs as many sealed queen cells as required to suspend in one cage, (with the sealed end downward, as found in the combs); place also the honey for feed between the tins in the cages; close the doors; remove a central comb from a strong colony of bees, and put the nursery into its place—letting it remain there till all the queens are hatched and matured for fertilization. Then they can be liberated as above directed. See figure, for further explanation.

JEWELL DAVIS.

INDIANAPOLIS, IND.

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For the American Bee Journal.

## Italians, &c.

In the December number of the JOURNAL we notice an article from S. Way, in which he makes the point-blank assertion the "black bees will make as much honey as the Italians, if they receive the same attention;" and the only reason we can find for the statement is a little further on, that he has "no axe to grind in the matter."

Mr. Editor, do you not think that it would have sounded much more respectful to the hundreds, nay thousands, who are keeping the Italians, had he qualified his remark by saying "such was his opinion," or that "from his own experience he judged so?"

Is the opinion of one man in one locality to decide the matter? Are the many noble hearts (for we are sure there are such) who write for the JOURNAL, and who have spoken enthusiastically of their success with the Italians, all to be considered as having "axes to grind?" or as not having tested black bees side by side with the Italians?

We presume Mr. Way to be an honest, upright man; but we really fear he thinks himself the only one engaged in the bee business, as, with one exception, he is the only person we ever knew to declare the Italians no better than the common bees. The exception was Mr. Jasper Hazen, who from a careful experiment given in the *Rural New Yorker*, with less than a half dozen hives, declared to the world that black bees, with some care, can make a little the most honey. We cannot remember positively, but think the black bees, *in his hive*, made over 200 pounds per colony, and the Italians some less—which *latter* we think is so.

Why does Mr. Hazen fuss with half a dozen stocks? Had he such an apiary as Mr. Quinby and some others, two hundred pounds per swarm would be a large business with his hive—but perhaps patent hives pay still better.

NOVICE.

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FOULBROOD is a disease exclusively of the larvæ, and not of the mature bees, nor of brood sufficiently advanced to be nearly ready to emerge.

For the American Bee Journal.

## How to treat the Fertile Workers.

MR. EDITOR:—I see in the November number of the BEE JOURNAL, page 99, J. W. G. asks what should be done with a good colony containing a fertile worker, &c.

Now, it may be interesting to J. W. G., and perhaps to others, for me to relate a few experiments I have tried, the past season, with such a colony.

Early in the season I drove a swarm out of a cross-bar hive, for the purpose of making an artificial colony. In twenty-four hours after the operation, supposing I had succeeded in securing the old queen in the new colony, I introduced a queen cell to the old hive. On examining the same hive twenty-four hours afterwards, I found the inserted queen cell all destroyed. I then went to my new colony and found they had commenced building drone combs, and on taking out some of the combs I found eggs in quite a number of the cells; and from the irregularity of the manner in which they had been deposited—some cells have a number of eggs, (as many as eight) and some none at all—I was satisfied I had a worker to contend with, for I have had them to contend with before. I now thought I would try a few experiments with this colony. In the first place I introduced a capped queen cell. On examining again twenty-four hours afterwards, I found that the bees had covered this cell completely all over with drone comb. I let them remain until it was past the time for the queen to hatch, and finding it did not hatch, I next introduced a queen in a wire cage, and on examining the hive again in the course of twenty-four hours, I found my queen dead in the cage, with two of her legs torn off.

I now turned the hive bottom up and tacked some wire cloth over the bottom, set it back again on its stand, and fumigated the bees with puff-ball. I allowed them to remain just fifteen minutes (having raised the hive up on little blocks, so that the air could pass under it); then removed the cap and honey-board, and dropped a young fertile queen in on the top of the bees. She was well received, and to-day that stand is as prosperous as any colony in my yard.

What effect the fumes of the puff-ball had on the worker, either mentally or physically, I am unable to tell. Whether it turned her "hate" into "love," or whether it killed her, others can judge as well as myself, but such was the result of my experiment.

My impression is that the fertile queen introduced as above stated, not being stupified with the fumes of the puff-ball, was in a state successfully to encounter any rival she might discover in performing the maternal duties of the hive.

One thing more; Mr. Thomas says we can successfully introduce queens with chloroform, *after* removing the old queen. Now, may we not do it *before* removing the old queen, on the principle before stated, allowing the introduced queen to kill her rival. Let some one report.

JOHN T. ROSE.

PETERSBURG, MONROE CO., MICH.

For the American Bee Journal.

## Recollections of the New York State Fair.

In the last number of the BEE JOURNAL, Mr. Hadsell, of Breesport, N. Y., gives a brief account of what he saw and heard concerning bees, at the State Fair at Elmira, in September last.

I also had the pleasure of attending that Fair, and must confess that I found it a very poor place in which to learn anything about bees. I saw there the Mr. Graves, referred to by Mr. Hadsell, and although he is a man who devotes his whole time to bees and hives, selling "rights," transferring, &c., I must give him the credit of having some of the most absurd ideas pertaining to the subject, of any man I ever talked with, who pretended to know anything about it. If he did not profess to know everything, and attend such gatherings for the purpose of lecturing to the multitude, he would be excusable; but as it is, I think he is not.

For the edification of any readers of the JOURNAL who may not have been present on this noted occasion, I will relate a portion of the teachings of this "grave" man.

He had on exhibition a hive which he called the "Graves Hive." It was, I should judge, about two-thirds full of comb, built moderately straight upon the frames; and when asked if he had not selected them from different hives, he answered—"Why, no, sir! You could not do it. It would be impossible!" "Don't you see," he continued, "that the tops of the combs are thicker in some places than in others; and that they are built waving from one side of the frame to the other. How are you going to change them?" All the answer we could make to this, was that we had been performing impossibilities all summer, for what would frames amount to, if you could not change them?

He then informed me that though he very seldom made use of smoke, and never used a bee-dress, his bees "never stung him." Just then, a bee (which must have belonged to some one else, I suppose, as his own had been taught better manners) gave him a smart "dab" under the eye, which caused him to suspend operations for a few minutes. He said that he had kept Italian bees, but would have nothing more to do with them, as the other bees would soon "run them all out;" and when asked to give his reasons for forming this opinion, he said—"because there are *so many more of them.*

He also informed us that he practised artificial swarming altogether, and when requested to give his method of performing this operation, said he simply "took half the combs and bees from the hive, and just put them in a new hive, filling out with empty frames." We rather objected to this on account of the amount of drone comb that would surely be built, if any was built before the young queen hatched. Whereupon he exclaimed that this "theory" was all nonsense; that "bees would build worker comb just as well without a queen as with one!" This was too much, so we asked him if he read the BEE JOURNAL. "No," said he "you may read BEE

JOURNAL all your life, and you only get other people's ideas; when, if you *learn* anything about bees, you've got to learn it yourself from actual experience. It won't do to believe everything, because somebody says its so." We partially agreed with him here, believing that he was one of the company referred to by himself as "everybody," and hence took his own word that it would not do to believe, &c.

I. F. TILLINGHAST.

FACTORYVILLE, PA.

For the American Bee Journal.

## Wintering Fertile Reserved Queens.

In the November number of the BEE JOURNAL, page 98, in the editorial appendage to I. F. Tillinghast's communication, the editor says—"What is wanted is some simple and efficient mode of doing it with a dozen or more at one operation, and with no greater trouble than is now incurred with one."

I think it can be done, and the *modus operandi* is simple.

Heretofore I have been in the habit of wintering queens in their nucleus hives, made to hold three frames from a large hive, doubling the nucleus swarms two into one, and placing them in a warm repository, 35° or 40° Fahrenheit, and all was right.

But I am now preparing to winter several in one large colony, having more queens than I can make strong nucleus swarms. The cages are made in a frame with strips half an inch thick, and as broad as the frame pieces, and placed 1½ inches apart. Put the first strips horizontal with the frame, 1½ inches either from the top or bottom of the frame, and nail through the end pieces of the frame into the ends of the strips. In the same manner fill the frame with strips 1½ inches apart. Now cut your cross bars 1½ inches long, and side them standing on end between the horizontal strips, 1½ or two inches apart, as you like best, until the frame is full, or as full as you dare cage queens, approaching the ends, top, and bottom of the frame.

Now cover the frame on one side with wire cloth, tacking it firmly to each strip to hold them in place.

As the queens are caged, a square piece of wire cloth, covering the mouth of each cage on the opposite side of the frame is tacked on. When the cages are all full except one, capture the queen of a very populous colony in a large hive, and put her in the empty cage. Now remove a frame from the center of the hive, and if necessary to cause the bees to cluster from end to end of the frames, condense them by crowding them to one side of the hive with the dividing board, and insert your frame of caged queens in place of the one removed; and as soon as the weather is sufficiently cool, place the hive in a warm, dry repository, of the temperature of about 35° or 40° F., and I will risk the queens coming out right in the spring. Should the result be different, I shall exclaim—"As in all other things, *theory* must fall when *practice* demonstrates the opposite."

A. SALISBURY.

CAMARGO, ILLS., Nov. 8, 1869.

For the American Bee Journal.

## The Honey Extractor.

I had my first experience with this machine last season, and found that it is just the thing for beekeepers.

I employed it but little in my own apiary, but used it for other beekeepers enough to satisfy myself that all who keep bees should have one of them, if they desire to make a sure thing to have honey enough for their own use.

A beekeeper called to see me one day in June last, and said his bees would not work in the boxes, and desired me to bring my machine and take the honey out of all his hives. I did so. I opened every hive he had, took out all the frames, brushed the bees off into the cap, and with a sharp knife uncapped all the cells of the combs. I then removed the honey with my extractor, which worked like a charm.

The hives operated upon were the shallow Langstroth form; some of the combs were crooked, and eight out of every ten contained sealed and unsealed brood; but neither the brood nor the combs were injured, and the bees worked next day just as though nothing had happened.

This fall I examined those hives, and all of them had enough honey to keep them ten months. Each of the hives was heavier than some that were not touched at all during the season.

My advice to beekeepers who have trouble in getting surplus honey, is, to purchase or make and use a honey machine. With the aid of my fumigator, I have no trouble in opening the largest stock of bees, and taking the honey from them.

HENRY ALLEY.

WENHAM, MASS.

For the American Bee Journal.

## Artificial Swarms.

I make artificial swarms thus: Take a hive of bees strong enough in numbers to make a strong swarm. On a pleasant day, when large numbers are out at work, remove it from its stand, and set the new hive in its place with the frames all in the right position. Then take out the combs, one by one, and with a feather brush *all* the bees and the queen off of all the combs, down on a sheet or board in front of the new or prepared hive, so that they may run up hill into it. Put the comb frames deprived of bees into an empty hive as they are brushed off, being careful not to leave a single bee on them. When all are in, remove some other strong hive from its stand to some other place, and in its stead set the hive containing the combs without bees. Then put a fertile queen caged between two brood combs in this hive, near the centre, and let her remain thus two or three days. Then release the queen, and the work is done. Bees enough will come from the removed hive to the old stand to take care of the brood and queen. In a few days the old hive will be strong in bees. The swarm brushed off the combs will of course be a strong one. The brushing off of *all* the bees was suggested to me by Mr. R. C. Otis.

P. W. MCFATRIDGE.

CARTHAGE, IND.

For the American Bee Journal.

## Introducing Queens, and the Honey-Emptier.

MR. EDITOR:—As your correspondent, W. C. Condit, wishes some of the correspondents of the BEE JOURNAL to give their experience in introducing queens with grated nutmeg, I would inform him that I have introduced a good many queens this season in that manner. If done in the morning or evening I have been very successful; but in the middle of the day, or when there were many bees out in the field, I have not been so successful.

Bees here have done very well the latter part of the season, or during August and September. The early part of the season having been wet and cold, there was no white clover or basswood honey secured in surplus boxes; but the bees gathered enough to keep the queen breeding very rapidly, and bees generally swarmed a great deal. Stocks that did not swarm gave good returns in surplus.

I used the honey machine on one hive, and got two hundred and eighteen (218) pounds of honey, as follows:

| | | |
|---|---|---|
| July | 7 | 16½ lb |
| " | 28 | 6 " |
| August | 14 | 27½ " |
| " | 21 | 35½ " |
| " | 27 | 34 " |
| September | 6 | 33 " |
| " | 11 | 28½ " |
| " | 21 | 37 " |
| | | 218 lb |

And I could have got more if I had emyloyed the machine oftener. I would not be without the honey machine for three times what it cost; but it should be made of tin or zinc, because wood absorbs so much honey that it will soon sour in warm weather, however careful you may be with it.

I can say to friend Gallup that there are plenty of those "shallow things" in use in this part of the west, and some as shallow as seven inches—that is, seven inches depth of frame. These shallow things give more surplus in boxes than the deep hive; but the shallowest ones have to be wintered in doors.

R. R. MURPHY.

FULTON, ILLS., Dec. 9.

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WHILE Huber resided at Cour, and afterwards at Vevay, his bees suffered so much from scanty pasturage, that he could only preserve them by feeding, although stocks that were but two miles from him were, in each case, storing their hives abundantly.

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SMALL ants sometime make their nests about hives, to have the benefit of their warmth, and neither molest the bees nor are molested by them.

For the American Bee Journal.

## A Non-fertile Queen Bee.

At the beginning of August, this year, I removed an extra nice queen from a colony of Italian bees, for the purpose of getting queen cells started. On examination, on the ninth day, I found only two sealed queen cells, with quite a large amount of brood still unsealed. To ascertain whether the bees would build any more queen cells and could raise a good queen, I took away both of those sealed cells. Two days later, I found only one more sealed queen cell, from which in due time a fine large queen hatched; but she never laid an egg, though all the other young queens mature at that time became fertile in due season. I therefore concluded to kill her, to make room for a better one. On catching her by the wings, however, she made a motion, the same as workers do, to sting me—thrusting out her sting, from which was suspended as large a drop of poison as is seen on the sting of a worker in such case.

On several other occasions, queens raised in such *post festum* built royal cells, became fertile indeed, but soon turned drone layers. And in a number of instances I have had queens superseded when only a week or ten days old, for some similar reason undoubtedly.

ADAM GRIMM.

JEFFERSON, WIS., Dec. 8, 1869.

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For the American Bee Journal.

## Chilling Brood.

MR. EDITOR:—I think that young brood is not so easily chilled, by exposure to cold, as many suppose; as I have been told by experienced beekeepers that it would not do to take a sheet of brood out of a hive unless the weather was quite warm.

Having in one of my hives, last season, a sheet of drone comb filled with young larvæ, I thought I would kill the brood, in order to have the comb filled with honey. So I put it into an ice-chest and left it there for about thirty hours, where the temperature was not far from the freezing point. Supposing everything dead, I put it into the hive. But on looking at it next day, I found that not one was hurt.

I then placed it in an empty hive, and in that burned a piece of brimstone, leaving it for about an hour. On close examination I found that there were still a few live larvæ in it. I then gave it another brimstoning, which finished them. I returned it to the hive, and in a few hours the bees had it cleaned out, and were putting in honey.

LESTER CARPENTER.

KELLEY'S ISLAND, OHIO.

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HUBER demonstrated that bees have an exceedingly acute sense of smell, and that unpleasant odors quickly excite their anger.

# THE AMERICAN BEE JOURNAL.

WASHINGTON, JANUARY, 1870.


## Special Premiums and Club Terms.

THE HORTICULTURIST AND THE AMERICAN BEE JOURNAL.

By special arrangement, we offer THE HORTICULTURIST, published by Henry T. Williams, New York, as a premium for five new subscribers to the AMERICAN BEE JOURNAL; or will offer THE HORTICULTURIST and the AMERICAN BEE JOURNAL on club terms, together, for $3 75, (full price being $4 50), each club subscriber being entitled to a choice steel-plate engraving, COUNTRY LIFE, and a copy of Adair's ANNALS OF BEE CULTURE.

We commend THE HORTICULTURIST to the attention of lovers of fruits, flowers, and rural embellishments. Having been greatly improved this year, it will be found one of the best and most valuable horticultural journals published in the United States.

## Ohio Bee-keepers' Convention.

We are requested to announce that, in accordance with the adjournment at Toledo, the Ohio Beekeepers' Convention will meet in Cleveland, Ohio, on *Wednesday, January* 13, 1870, at 10 o'clock A. M., at the City Hotel, where rooms have been offered free for the accommodation of the meeting. A general attendance of Ohio beekeepers is solicited; and persons engaged or interested in bee culture in other States are cordially invited to be present and participate in the proceedings.

## The Foulbrood Controversy.

We have received from the Baroness of Berlepsch and Mr. Lambrecht, some additional communications respecting the foulbrood theories of the latter and Dr. Preuss; but having already published in detail the views of the subject entertained by both parties, we cannot afford to devote further space to discussions involving no direct practical results. Mr. Lambrecht, in addition to his theoretical speculations, gave what he regarded as a practical domonstration of the correctness of the position assumed by him, and of the efficacy of his curative process. This we promptly submitted to the judgment of our readers, stating at the same time that its validity was questioned by those who do not accept the theory. If now Dr. Preuss, or any of his apiarian friends, will favor the beekeeping community with evidence of his ability to *cure the disease* in accordance with his theory of its cause or source, we shall take great pleasure in placing the facts before the readers of the JOURNAL, and do so promptly. We desire to see both theories so subjected to the test of actual experiment that the issue may clearly and conclusively settle the validity and availability of the means employed; and we shall certainly not withhold cordial commendation from him whose remedial process successfully abides this test—and if both prove efficacious, the benefit accruing therefrom to practical bee culture will be only the greater and more gratifying. It is a homely adage, but none the less pointed, that "*the proof of the pudding is in the eating of it.*"

☞Just as we write this, we receive from an esteemed distant correspondent the following statement of the occurrence of foulbrood in his apiary, and of the mode of its origination. Without stopping now to investigate the bearing of the facts in this case on the several theories in question—we hope to hear, early, that the malady has been arrested and subdued.

MR. EDITOR:—I have foulbrood in six hives. I am sure of it, although I never saw it before. And the worst of all is, I am confident I produced it myself. I cut a bee tree in September last. The tree was a large oak—mashed up badly. I scooped up out of the hollow, several buckets of comb, dead bees, pollen, &c., intending to have it strained up; but putting it in a storeroom, overlooked it for several days; at the end of which time it was reported to me as being in a state of fermentation. I ordered it, without thinking, to be thrown out—which was done. Passing near the place some hours afterwards, I noticed thousands of bees at work, carrying it away. I did not think of what I had done, until several weeks afterwards, I noticed in opening a hive near this place a horrible stench, unlike anything in the odor line I had ever met with before. Upon examination, I found the hive full of dead brood. I examined and found six in the same condition. I removed a comb to a study hive, and placing a very prolific queen in it, found that only a few bees matured of the many hundreds that were sealed up apparently in good condition. This study hive I placed in my parlor window, and the stench arising from it was so great that I could scarcely remain in the room. I can now distinguish the peculiar odor several feet from the hives affected, although there is no young brood at this time in any of them. What shall I do? I have written to Mr. Langstroth. He says, burn hives and all. But as these are the only frame hives I have, or have ever seen, I am loth to burn them. I have them three miles from any others, and would be glad if you, or any of your readers, could suggest a cure by which I may preserve both bees and hives. I am willing to sacrifice the comb. Our bees are out now almost every day. They are not often confined in this latitude longer than a week at any time during the winter.

W. H. MORGAN.

SHELL BLUFF, YAZOO RIVER, MISS., Dec. 3, 1869.

## Correspondence of the Bee Journal.

LIMA, OHIO, Nov. 22.—Bees have done poorly again this season, it having rained almost constantly up to July 20. But August was good, and bees have generally filled their hives and are in good wintering condition. The Italians swarmed enough, and made some surplus honey; while of the black bees not one stock in twenty have swarmed at all, and made no surplus.—S. SANFORD.

MONMOUTH, ILLS., Nov. 22.—We have had a severe snow storm here during the past ten days. To-day it began to thaw. Bees are in fine condition for wintering, in regard to the amount of honey. I increased my stock one and one third, and made them average me one hundred and ten (110) pounds to the stand—which I think is doing pretty well.—T. G. MCGAW.

UPPERVILLE, VA., Nov. 22.—I intended a rather curious present for you a few days ago. A colored man found a swarm of bees which had built a considerable quantity of comb on the under side of a limb of a tree, It must have gone there very early in the spring, judging from the quantity of comb built. I made a glass box, intending to saw the limb off on each side of the comb and fasten it in the box. But unfortunately some one went there, and as a matter of course broke it to pieces. The foliage on the trees prevented it from being found sooner. I should have been pleased if I could have procured it all safe, and sent it to you as a curiosity.—H. W. WHITE.

☞We knew of a similar instance about twenty years ago, and in that case also the combs were broken and the swarm destroyed in the attempt to remove it.—ED.

GLENDALE, OHIO, Nov. 25.—Bees have done *remarkably* well with us the past season, making a *very* large yield of honey. I notice that mine have their combs so full of honey, that I fear there is not enough empty comb for them to winter on. I have the Italian bees, which I obtained from Mr. Langstroth, and find them greatly superior to the common bee. In the neighborhood of my bees one could see *scores* of them, at almost any spot, on the red clover, in July and August. During that time, which is unusual here, comb-building went on briskly, and much honey was stored.

I shall have to defer my report on bee pasturage to another season, on account of losing my memoranda. It is to be hoped that we shall have many other reports on bee pasturage, in addition to the valuable ones we have already had, in the JOURNAL, from several sources. I hope to add mine another year.—JOHN HUSSEY

CONSTANTIA, N. Y., Nov. 29.—Bee culture, in this part of the State of New York, has been a failure the past season, on account of so much wet weather: and a number of beekeepers will have to feed their bees this winter. From eighteen good swarms of black bees I did not get ten pounds of honey.—W. SHELDON.

WATERVILLE, VT., Nov. 30.—Bees have not done very well around here this season, on account of the weather being so cold and wet during the entire period. Swarms were late; few coming off before July 1st. Box honey is scarce, there having been little taken off in this neighborhood. There is quite a number of beekeepers around here, whose bees are now dying from starvation. The bees have been living on their winter stores since August 15th—consuming on an average about twelve (12) pounds, each, since that date; and unless fed many will starve before spring. We have now fully four months to keep our bees in, before they can fly.

Bee culture is in a rude state about here. There are only two persons in this neighborhood keeping bees in movable comb hives—myself being one of them. I made me a "honey emptying machine" last winter, and people looked upon it with wonder, and wanted to know where I found such a thing as that, saying they had kept bees for twenty years and never heard of the like of it before.—O. P. CODDING, Apiarian.

ALBANY, ILLS., Nov. 17.—My bees have done very well this season. I had ten stocks in the spring, and now have twenty-five, all in good condition for winter. My best stock swarmed twice and filled fourteen six-pound boxes. The first swarm came off June 4th. I filled the hive with empty combs. The second swarm came off June 12th, and filled eight six-pound boxes. The first swarm swarmed twice and filled eight six-pound boxes. The first of these swarms came off July 9th, and filled three and almost the fourth six-pound boxes. The second came off August 5th.

The four swarms at $5 each make $20: and two hundred pounds of box honey at 25 cents per pound make $50—the increase of stock and the honey making together $70. If I had a honey emptying machine, I could take 50 or 75 pounds more.

The bees in this vicinity gathered honey abundantly up to the 26th of September. The original stock abovementioned commenced storing honey while the cherry trees were in blossom.—ANDREW BYERS.

DOVER, N. H., Dec. 3.—Next in importance to my religious papers, do I consider the BEE JOURNAL. I am unwilling to do without it. Bees have not done as well this season, as for two seasons previous: yet the intelligent beekeeper can receive ample compensation in seasons like this for his time and expenses. Within please find two dollars for the BEE JOURNAL.—JESSE MEADER.

BIRMINGHAM, IOWA, Nov. 29.—I neglected to tell you in my last note, that although my bees did well this season, and have atpresent more honey than they need for winter, yet the colonies contain fewer bees than they did at this time last season. The honey harvest was very abundant here from August 13th till October 1st, and the queens had very little space to lay in during that time: hence the small colonies at present. I have always wintered my bees out of doors, but I really fear, from the present condition of my stocks, that if the coming winter is very severe, I shall lose a good many.—JOHN LOCKE.

NIAGARA, CANADA, Dec. 10.—I found the last a very poor season. The bees increased sufficiently, but honey was very scarce. I had not one box filled, and had to reduce my stock to the number I started with in spring. F. G. NASH.

HARTLAND, VT., Dec. 14.—The past season was the poorest that we have experienced. Bees have been dying about here ever since the 10th of August. We have kept bees four years, wintered them in our house cellar, and have lost only one swarm since we began keeping bees. We have now upwards of thirty stocks in our cellar: but I am afraid that we shall not be able to say next spring that we never lost but one swarm. As we were anxious to keep our number full, we fed those that needed it instead of un ting them as we should have done. Breeding not having been carried on to any great extent, about here, after the 20th of July, our colonies are not as populous as they usually were in the fall of the year. The past season will undoubtedly prove rather discouraging to many new beginners, but not to us. Beekeeping always has been attended with now and then a poor season: and therefore we anticipate to have plenty of box and machine honey next season.—GEO. M. D. RUGGLES.

NORTH BENNINGTON, VT., Nov. 14.—I have read your valuable JOURNAL for the last two years, with a great deal of interest, and prize it very much. I would not do without it for double the cost: all the fault is, it does not come often enough.

I have been very much interested in bees for a number of years, but never owned any till the fall of 1868. I then bought fourteen colonies in box hives, all Italians but six, and those were hybrid. I had those six Italianized by Mr. Carey, of Coleraine, Mass. They produced finely marked workers, but the queens did not seem to be very prolific. Five of them have died off. I wish to tell you of a caper one of those swarms played last spring, in May, when there was only about a quart of black bees left in the hive, the rest being Italians I went through the apiary in the afternoon, and just at night; and all was quiet enough. Next morning, when it was hardly light, I came to this hive, and lo! the Italians had gone to work in the night and killed every black bee in the hive. When they had got through they went to work as quietly and regularly as though civil war was perfectly right. I know they were not robbed, for my other bees were not out, nor those of my neighbors.

I wintered my bees in the house, or tried to; but in February I had to take them out, as they had become uneasy—it being very warm for two or three days. I carried them out in the evening and gave them air, but did not let them fly till next day: then they did not all rush out at once. I have had a building erected to house them in this winter. It is 14 feet by 18, with eleven feet posts, thus giving me a nice warm room to work in when bees are not in, and a place overhead to store hives, boxes, lumber, &c. It is very handy, and I would not do without it for the $125 which it cost. Novice will agree with me when his beehouse is built.

I am going to adopt frame hives, for I see plainly that we are behind the times in beekeeping here, where no such hives are yet used. The bee fever ran very high here last spring, as bees did well. There being an abundance of fruit blossoms, they began to swarm early: then followed a cold and rainy spell, raining about all the time the white clover was in bloom. My Italians got a chance to work on red clover a few days, and they lugged in honey lively. That, I think, was what saved them. I do not get any box honey; but I know of some beekeepers—not apiarians by any means—who have brimstoned from ten to twenty swarms of black bees at a time, for want of honey. By the way, prices of bees are very low in this vicinity this fall. I heard a man offer 46 swarms, 200 boxes, and a lot of hives, for $4 50 per swarm. He could not give them to me. He has kept bees a number of years, and supposes it is time for him to run out; and I guess he or any other man will that buys bees up North cheap, where they get foulbrood as they have it in that yard.

I send you this, as I have never seen any article from beekeepers in this quarter, in the BEE JOURNAL. Inclosed you will find two dollars, for renewal of subscription. Wishing you and all beekeepers success, I am yours truly,

C. H. BASSETT.